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## AMENDMENTS TO THE SPECIFICATION

Please delete the paragraph entitled, "CROSS-REFERENCE TO RELATED APPLICATIONS", and replace it with the following paragraph:

The present application is a continuation of ~~and claims priority to co-pending non-provisional patent application U.S.S.N.~~ U.S. Application No. 09/331,718, filed on September 24, 1999, now U.S. Patent No. 6,724,995 B1, which was the National Stage of International Application No. PCT/DK97/00591, filed on December 22, 1997, which claims the benefit of Denmark Application No. 1504/96, filed on December 23, 1996.

Please delete the paragraph starting on page 3 line 2 and replace it with the following paragraph:

When~~, as stated in claim 1~~, the router comprises two optical couplers interconnected serially via a delay device and wherein the optical router further comprises an optical amplifier optically connected to one of the optical couplers, a simple and economical router obtained, which may be designed according to simple dimensioning principles and be adapted to concrete applications. The property that for each optical input an optical coupler ideally divides an arriving optical signal between the outputs of the coupler means that an output signal from the first coupler contains mixed signals, which may subsequently be "mixed back" in the following optical coupler. In a suitable embodiment of the delay device, this back-mixing may have the effect that signals with different wavelength components may be fed jointly and selectively to a selected output port on the following coupler, ideally, with conservation of energy, as the interferometer properties of the delay device are utilized.

Please delete the paragraph starting on page 4 line 7 and replace it with the following paragraph:

When~~, as stated in claim 2~~, the delay device comprises a difference in distance $\Delta L$ between the two optical guides connecting the two couplers, a simple embodiment of the invention is obtained, as the difference in distance $\Delta L$ provides a mutual phase shift between the two optical signals on the input of the following coupler, which means that the coupler serves as an interferometer in the mixing in the coupler itself.

Please delete the paragraph starting on page 4 line 19 and replace it with the following paragraph:

When~~, as stated in claim 3,~~ 3 dB couplers are used, a particularly simple embodiment of the invention is obtained. The use of 3 dB couplers will usually be preferred, as the characteristic of the complete router is particularly simple when the optical branches of the constituent couplers are symmetrical.

Please delete the paragraph starting on page 4 line 25 and replace it with the following paragraph:

When~~, as stated in claim 4~~, the delay device is formed by one or more pairs of electrodes arranged along the optical path, a further embodiment of the invention is obtained, wherein a desired phase shift between the optical signals may be achieved by changing the refractive index in the optical path in the delay element in response to an electrical field applied by the electrodes.

Please delete the paragraph starting on page 5 line 1 and replace it with the following paragraph:

When~~, as stated in claim 5~~, the delay element is provided with one or more pairs of electrodes arranged along the optical path in the delay element to achieve a supplementary time delay, an advantageous embodiment of the invention is obtained, as a desired phase shift between the optical signals may be obtained at an optical difference in distance $\Delta L$, and be finely adjusted by changing the refractive index in the optical path in the delay element in response to an electrical field applied by the electrodes.

Please delete the paragraph starting on page 5 line 11 and replace it with the following paragraph:

When~~, as stated in claim 6~~, $\Delta L$ is equal to $\lambda^2/(2\Delta\lambda n)$ where $\lambda$ indicates the optical wavelength used, n is the refractive index, and $\Delta\lambda$ indicates the half-period of the power transfer function, i. e. $\frac{1}{2}$FSR (FSR = free spectral range), a practical embodiment of the invention is obtained.

Please delete the paragraph starting on page 5 line 21 and replace it with the following paragraph:

When~~, as stated in claim 7,~~ the router is made in an integrated design, an optimum design for commercial use obtained. This should be taken to mean that the actual design of the delay element is to be made with a relatively great precision, as the necessary distances $\Delta L$ are relatively small, and even small deviations therefrom give rise to a relatively great unreliability with respect to the overall system.

Please delete the paragraph starting on page 5 line 29 and replace it with the following paragraph:

When~~, as stated in claim 8,~~ the optical signals in each direction toward the router are fed to the first bidirectional port A and the second bidirectional port D, respectively, of the router and from there to the first unidirectional port B of the router, further through an optical amplifier connected to the unidirectional ports and from there through the second unidirectional port C of the router and back through the router to the second bidirectional D and the first bidirectional port A, respectively, an effective bidirectional amplification is obtained, using relatively inexpensive elements. The bidirectional amplification obtained is moreover obtained using just one monodirectional amplifier.

Please delete the paragraph starting on page 6 line 10 and replace it with the following paragraph:

When~~, as stated in claim 9,~~ $\lambda_{r1}$ and $\lambda_{r2}$ are allocated on the power transfer function of the router in one transmission direction on each side of a maximum of $\lambda_R$, and $\lambda_{11}$ and $\lambda_{12}$ are allocated on the power transfer function of the router in the other transmission direction on each side of a maximum of $\lambda_L$, said bidirectional optical signals having the wavelengths $\lambda_{11}$ and $\lambda_{12}$ in one direction and having the wavelengths $\lambda_{r1}$ and $\lambda_{r2}$ in the other direction, said $\lambda_L$ and $\lambda_R$ indicating a maximum in a specific frequency band for the power transfer function of the router in one direction and the power transfer function of the router in the other direction, respectively, an effective amplification of a bidirectional signal is obtained, using a relatively simple and inexpensive technique, as a two-channel signal may thus be transmitted and amplified each way through the router.